

## THE CLAIMS

### What is claimed is:

- 5 1. Adult stem cells which are obtained by culturing umbilical cord-derived blood in a medium containing 5-20% of human serum or plasma and show the characteristics of:
  - (a) showing positive immunological responses to all of CD24, CD29, CD31, CD33, CD45 and CD49B, and negative immunological responses to CD34, 10 CD51/61, CD62L, CD62P, CD73, CD90, CD133 and CD135;
  - (b) growing adhered to plastics and showing round-shaped or spindle-shaped morphological features; and
  - (c) having ability to differentiate into mesodermal, endodermal and ectodermal cells.
- 15 2. The adult stem cells according to claim 1, wherein additionally show positive immunological responses to SH-2 and/or SH-3.
3. The adult stem cells according to claim 1, wherein positive or negative 20 immunological responses to CD44, CD105 and CD117
4. The adult stem cells according to claim 1, wherein the mesodermal cells are osteogenic cells, nerve cells or endothelial cells.
- 25 5. A method for producing adult stem cells showing the following characteristics:
  - (a) showing positive immunological responses to all of CD24, CD29, CD31, CD33, CD45 and CD49B, and negative immunological responses to CD34, CD51/61, CD62L, CD62P, CD73, CD90, CD133 and CD135;
  - (b) growing adhered to plastics and showing round-shaped or spindle-shaped 30 morphological features; and

(c) having ability to differentiate into mesodermal, endodermal and ectodermal cells, the method comprising the steps of: culturing umbilical cord-derived blood in a medium containing 5-20% of human serum or plasma; and recovering the adult stem cells.

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6. The method for producing adult stem cells according to claim 5, wherein the human serum or plasma is autologous or allogous.

7. A cellular therapeutic agent for ischemic necrotic disease caused by occlusive arterial disease, which contains the adult stem cells according to any one claim 10 among claims 1~4, as active ingredients

8. The cellular therapeutic agent for ischemic necrotic disease caused by occlusive arterial disease, wherein the ischemic necrotic disease is myocardial infarction, 15 cerebral infarction, Buerger's disease, or gangrene of extremities resulting from diabetic complications.